

Amendments to the Claims:

The following listing of claims replaces all prior versions and listings of the claims in this application.

Listing of the Claims

1. (Currently amended) A method for proliferating cardiomyocytes comprising: introducing nucleotide sequences coding for a nuclear localization signal, a ~~recombinant~~ D-type cyclin gene and a ~~recombinant~~ cyclin dependent kinase gene directly into the ~~nucleus of~~ cardiomyocytes using a vector ~~or other delivery system~~, and cultivating or holding said cells, wherein said cyclin gene is a gene coding for cyclin D1, D2 or D3 and wherein said cyclin dependent kinase gene is a gene coding for CDK4 or CDK6.
2. (Currently amended) A method for proliferating cardiomyocytes comprising: adding nucleotide sequences coding for a nuclear localization signal to at least one D-type cyclin gene and a cyclin dependent kinase gene; and introducing each of said genes to cardiomyocytes *in vitro*, and then cultivating said cells, or introducing each of said genes directly to cardiomyocytes *in vivo* using a vector ~~or other delivery system~~, wherein said cyclin gene is a gene coding for cyclin D1, D2 or D3 and wherein said cyclin dependent kinase gene a gene coding for is CDK4 or CDK6.
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Previously presented) The method of claim 2, wherein said cyclin gene and said cyclin dependent kinase gene are transferred to the cardiomyocytes using an adenovirus vector.
7. (Withdrawn) A recombinant vector comprising a cyclin gene comprising a nucleotide sequence coding for a nuclear localization signal.